

**REMARKS/ARGUMENTS**

Claims 1-20 and 32-56 have been resubmitted. Claims 21-31 and 57-63 are allowed. Claims 1, 32, 37, 42, 49, 53, and 54 have been amended. Claim 50 has been canceled. No new claims have been added.

Claims 1-20, 32-41, 49, 51-52, 55-56 have been rejected under 35 USC 102(b) as being anticipated by Shoki (U.S. 6,308,085). Claims 42-48 have been rejected under 35 USC 102(b) as being anticipated by Sreenivas (U.S. 5,132,694). Claims 1-20, 32-36 have been rejected under 35 USC 103(a) as unpatentable over Lier et al. (U.S. 6,411,256) in view of Petrofsky (U.S. 5,724,972).

**Allowable Subject Matter**

Claims 21-31 and 57-63 are allowed and Applicant respectfully accepts the allowed claims.

Claims 50, 53-54 are objected to as being dependent on a rejected base claim but allowable if rewritten to include limitations of the base claim and intervening claims. Applicant would like to thank the Examiner for the notice of allowable subject matter and has amended base claim 49 to incorporate the limitations of claim 50 (canceling claim 50 and correcting the dependency of claims 53-54).

Thus, it is believed that claims 49 and 51-56 are now in condition for allowance, notice of which is respectfully requested.

Shoki

Claims 1-20, 32-41, 49, 51-52, 55-56 have been rejected under 35 USC 102(b) as being anticipated by Shoki (U.S. 6,308,085). Claims 1, 32, and 37 have been amended. Claim 49 has been amended as per the notice of allowable subject matter. Support for the amended claims can be found in the specification, for example, at paragraphs [029] and [031].

While Shoki may teach a phased array antenna including a plurality of assemblies, each assembly including a plurality of elements and a plurality of digitally controlled centralized beam formers coupled to respective ones of the plurality of elements, or a row assembly including a plurality of radiating elements and a plurality of digitally controlled centralized beam formers coupled to respective ones of the plurality of radiating elements, or a row assembly including a plurality of receiving elements and a plurality of digitally controlled centralized beam formers coupled to respective ones of the plurality of receiving elements, Shoki does not disclose either a phased array antenna or row assembly with centralized beam formers being operable to provide (receive) a first signal to the respective ones of the plurality of elements representative of a plurality of signals for a first polarization and a second signal representative of a plurality of signals for a second polarization as in the claims as currently amended.

#### Sreenivas

Claims 42-48 have been rejected under 35 USC 102(b) as being anticipated by Sreenivas (U.S. 5,132,694). Claim 42 has been amended. Support for the amended claim can be found in the specification, for example, at paragraphs [029] and [031]. Sreenivas does not disclose a satellite with a phased array antenna having centralized beam formers being operable to provide a first signal to the respective ones of the plurality of elements representative of a plurality of signals for a first polarization and a second signal

representative of a plurality of signals for a second polarization as in claim 42 as currently amended.

Lier et al. in view of Petrofsky

Claims 1-20, 32-36 have been rejected under 35 USC 103(a) as unpatentable over Lier et al. (U.S. 6411256) in view of Petrofsky (U.S. 5,724,972). Claims 1 and 32 have been amended. Because neither Lier et al. nor Petrofsky disclose a phased array antenna having centralized beam formers being operable to provide a first signal to the respective ones of the plurality of elements representative of a plurality of signals for a first polarization and a second signal representative of a plurality of signals for a second polarization as in claims 1 and 32 as currently amended, it is believed that those claims are now patentable over Lier and Petrofsky, whether alone or in combination.

CONCLUSION

Reconsideration and withdrawal of the Office Action with respect to claims 1, 32, 37, and 42 and claims depending from them is requested. Applicant respectfully accepts allowance of claims 21-31 and 57-63. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

In the event the examiner wishes to discuss any aspect of this response, please contact the attorney at the telephone number identified below.

Respectfully submitted,

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